

REMARKS

Reconsideration of the subject application as amended herein is respectfully requested.

Some of the existing claims have been amended to correct some informalities. The claims have been amended to recite that the sounds are played using the control signals to recreate the original acoustic environment. Some of the claims have also been amended to recite that the acoustic characteristics of the local playback listener site may be entered manually or can be detected automatically. Support for these terms is found inter alia at page 2 first paragraph and page 3 second and third paragraph. Finally, new claims have also been added which define the invention in broader terms than previously submitted claims.

The Examiner has rejected the claims as being anticipated by Anderson or obvious in view of Anderson alone or in combination with Begault. The Applicants respectfully traverse these rejections. The Anderson reference discloses a large digital speaker system for transmitting audio signals to a large number of people. For this purpose, each speaker is designated with an address and multiple signals are sent to the speakers using a standard TDM scheme. The whole purpose of this complicated scheme is to insure that clusters of listeners within range of different speakers receive the same sound at the same time (See col. 6, lines 24-29). In other words, the control signals are used to adjust the sounds to the local site characteristics.

Several important features distinguish the present invention from this system. First, the present invention is a playback system that is used to detect signals on a recording media and play these signals back as sounds. No such recording media is disclosed.

Second, the control signals are intermixed with the sound signals on the recording media provided at the listener's local site. In Anderson, whatever control signals are generated are added by a signal processor at the local site (see Fig. 1). The audio signals originate from analog or digital inputs 13, 15. Whatever the source of signals to these inputs is, it is clear that

the signals themselves do not contain any control signals whatsoever.

Third, Anderson does not teach that it is desirable to reproduce the original acoustic environment, nor does Anderson teach or even suggest how such a process can be accomplished.

Regarding claims 31 and 32, the Examiner has taken the position that it would be obvious to use the Anderson system in a recording media for playback, and to that recording control data during recording is inherent as a recording is made on a media. It is submitted that Anderson has nothing to do with recording media, that there is no disclosure in Anderson of any control signals being recorded and that the Examiner has failed to provide any evidence that would show that control data includes information indicative of the recording conditions. Moreover, the Examiner has failed to provide any evidence to indicate that any recorded control data has any relation to the original recording acoustic environment.

The Begault reference discloses an apparatus for producing pseudo-stereophonic sound from monaural audio signal using two headphones. It is respectfully submitted that there is nothing in any of these references to show how a system using headphones, one for each side of the head of a listener is applicable in any way to a system in which speakers are distributed over a large area so that many listeners can hear the same sounds. In any event, Begault does not provide any more relevant disclosure than Anderson.

It is respectfully submitted that the subject application is patentably distinguishable over the prior art of record and therefore it should be allowed.

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Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (AMENDED) A playback system for reproducing audio data and reading acoustic control data from a recording medium, said acoustic control data including information related to the characteristics of the original acoustic environment associated with the production of said recording media, comprising:

a demultiplexer for retrieving audio data and acoustic control data,
said acoustic control data providing a predetermined number N of inputs

to

gain and phase circuits,
delay and reverberation circuits,
equalizer circuits, and
gain/attenuation circuits,

said gain/attenuation circuits connected to output to a second
predetermined number M of summation channels,

said audio data feeding serially through said

gain and phase circuits,
delay and reverberation circuits, and
equalizer circuits;

wherein the operation of said gain and phase circuits, said delay and reverberation circuits and said equalizer circuits is adjusted in accordance with said acoustic control data to replay said audio data by recreating said original acoustic environment.

2. (AMENDED) The playback system for reproducing audio data and reading

acoustic control data of claim 1 wherein said audio signals are replayed at a listener site, further comprising a listener input circuit connected to provide signals, said listener input signals adapted to alter default data from said media and to interact dynamically with bias providing information in said default data indicative of the local characteristics of the listener site .

3. (AMENDED) The playback system for reproducing audio data and reading acoustic control data of claim 1 further comprising a player type register providing a signal indicative of parameters of the playbackrecording medium to said gain and phase circuits, delay and reverberation circuits, and equalizer circuits to provide informationinformation indicative of the characteristics of a player for the media.
media, a player type register providing a signal indicative of parameters of the recording medium to said gain and phase circuits, delay and reverberation circuits, and equalizer circuits to provide information indicative of the characteristics of a player for said recording medium.

4. (AMENDED) The playback system for reproducing audio data and reading acoustic control data of claim 2 further comprising a player type register providing a signal indicative of parameters of the playbackrecording medium to said gain and phase circuits, delay and reverberation circuits, and equalizer circuits to provide informationinformation indicative of the characteristics of a player for the media-said recording medium.

21. (AMENDED) A playback system for reproducing audio signals from a data stream containing audio and control data, said control data being related to characteristics related in the original acoustic environment in which said audio data has been recorded, said system comprising:

a demultiplexer arranged to separate said audio and control data; and

a playback circuit adapted to convert said audio data into audio signals at a local playback site in accordance with said control data to recreate the original acoustic environment.

24. (AMENDED) The playback system of claim 21 wherein said playback circuit includes an adapter circuit that changes said control data in accordance with local data indicative of physical conditions associated with the replay.

26. (AMENDED) The playback system of claim 24 further comprising a ~~local data-sensing circuit that senses~~ closed loop back circuit adapted to automatically determine said local data.

27. (AMENDED) The playback system of claim 26 wherein said ~~local data sensing system~~ closed loop back circuit includes a speaker arranged to receive and play an acoustic test signal and a microphone arranged to sense a response corresponding to said acoustic test signal.

31. (AMENDED) A playback system for reproducing audio signals from a data

stream containing audio and control data with information indicative of recording conditions in an original acoustic environment during the recording of said audio signals, said system comprising:

a demultiplexer arranged to separate said audio and control data; and

a playback circuit adapted to convert said audio data into audio signals in accordance with said control data to compensate said audio signals for the recording conditions ~~and~~ recreate said original acoustic environment.